

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of controlling hardware resources in a wireless communication device having a processor and a memory coupled to each other, the method comprising the steps of:

locating a first memory address in the memory associated with a first hardware resource;

transmitting control information associated with the first memory address to the first hardware resource to enable utilization of the first hardware resource; and

determining a pointer that is associated with the first address and that locates a subsequent another memory address in the memory associated with a subsequent hardware resource that can be subsequently utilized.

2. (Currently amended) An apparatus apparatus for managing hardware resources in an electronic a wireless communication device having a controller and a memory, the apparatus comprising:

means for locating a first memory address in the memory associated with a first hardware resource;

means for transmitting from the controller control information associated with the first memory address to the first hardware resource; and

means for determining a pointer that is associated with the first memory address and that locates a subsequent another memory address in the memory associated with a subsequent another hardware resource.

3. (Currently amended) In an electronic device having a processor, a memory, and at least one hardware resource coupled to each other, a A method of dynamically implementing changes for scheduling the at least one hardware resource of a wireless communication device, the method comprising the steps of:

a) receiving a first list of addresses associated with the at least one hardware resource, the first list of addresses listing active operation information for the at least one hardware resource;

b) receiving a second list of addresses associated with the at least one hardware resource, the second list of addresses listing backup operation information for the at least one hardware resource;

c) receiving a request to modify an operation of the at least one hardware resource in a given category;

d) modifying the second list of addresses to reflect the request to modify the operation of the at least one hardware resource;

e) exchanging the active/backup status of the first list of addresses and the second list of addresses;

f) duplicating the active second address list as replacement for the backup first list of addresses; and

g) operating the at least one hardware resource according to the modified active-status second list of addresses.

4. (Currently amended) An apparatus for dynamically implementing changes for scheduling at least one hardware resource in ~~an electronic a wireless communication~~ device ~~having a controller and memory~~, the apparatus comprising:

memory means for receiving and storing a first list of addresses associated with the at least one hardware resource, the first list of addresses listing active operation information for the at least one hardware resource;

memory means for receiving and storing a second list of addresses associated with the at least one hardware resource, the second list of addresses listing backup operation information for the at least one hardware resource;

controller means for receiving a request to modify an operation of the at least one hardware resource in a given category;

said controller means operating for:

modifying the second list of addresses to reflect the request to modify the operation of the at least one hardware resource;

~~means for~~ exchanging the active/backup status of the first list of addresses and the second list of addresses;

~~means for~~ duplicating the active second address list as replacement for the backup first list of addresses; and

~~means for~~ operating the at least one hardware resource according to the active modified second list of addresses.

5. (Currently amended) ~~In an electronic device having a processor, a memory, and hardware resources coupled to each other, a~~ A method of operating the ~~a~~ plurality of hardware resources of a wireless communication device comprising the steps of:

a) locating a current address in ~~the a~~ memory, the current address containing operating information associated with a current hardware resource of the plurality of hardware resources;

b) transmitting to the current hardware resource operating information associated with the current address to the current hardware resource; and

c) reading a pointer in the memory, which is associated with the current address, that identifies ~~a subsequent another~~ address containing ~~subsequent~~ operating information for operating another hardware resource of the plurality of hardware resources.

6. (Currently amended) The method of claim 5, wherein the method further comprises the step of:

d) determining whether the current hardware resource is reused within a system cycle cycle.

7. (Currently amended) The method of claim 6, wherein if the current hardware resource is reused within a system cycle cycle, further comprising the step steps of:

e) saving the current hardware resource information from a current use; and

f) repeating steps b), c), and d) until the current hardware resource is not reused within a system cycle cycle.

8. (Currently amended) The method of claim 6, wherein if the current hardware resource is not reused within a system cycle cycle, further comprising the steps of:

e) determining whether operation of the current hardware resource should be terminated; and

f) if operation of the current hardware resource should not be terminated, repeating steps a), b), c), and d) for a subsequent another hardware resource of the plurality of hardware resources that becomes the current hardware resource.

9. (Currently amended) The method of claim 5, wherein the a hardware resource is at least one of a searcher element, a downlink transmitter element, matched filter element, or tracker element.

10. (Currently amended) An apparatus apparatus for dynamically implementing changes for scheduling hardware resources in an electronic a wireless communication device having a controller and memory, the apparatus comprising:

- a) means for locating a current address in the memory, the current address containing operating information associated with a current hardware resource;
- b) means for transmitting operating information associated with the current address to the current hardware resource; and
- c) means for reading a pointer, ~~which is~~ associated with the current address, that identifies ~~a subsequent another~~ address containing ~~subsequent~~ operating information for another hardware resource of the device.

11. (Currently amended) The apparatus of claim 10, further comprising:

- d) means for determining whether the current hardware resource is reused within a system ~~cycle~~ cycle.

12. (Currently amended) The apparatus of claim 11, wherein if the current hardware resource is reused within a system ~~cycle~~ cycle, further comprising:

- e) means for saving the current hardware resource information from a current use.

13. (Currently amended) The apparatus of claim 11, wherein if the current hardware resource is not reused within a system ~~cycle~~ cycle, further comprising:

- e) means for determining whether operation should be terminated.

14. (Currently amended) The apparatus of claim 10, wherein ~~the a~~ hardware resource is at least one of a searcher element, a downlink transmitter element, matched filter element, or tracker element.

15. (Currently amended) ~~In a communication device having a processor, a memory, and hardware resources all coupled to each other, a~~ A method of

generating a scheduler for managing ~~the a plurality of~~ hardware resources of ~~the a~~ wireless communication device, the method comprising the steps of:

- a) receiving ~~determining~~ a quantity of available hardware resources for the communication device;
- b) generating a list in ~~the a~~ memory for linking requests to the hardware resources;
- c) receiving ~~information of~~ a desired quantity of hardware resources to be operated in the communication device;
- d) receiving hardware resources operation information;
- e) receiving a request to use at least one of the hardware resources;
- f) assigning ~~a memory an address in the memory~~ to the hardware resource operation information for each of the hardware resources; and
- g) linking the memory addresses of hardware resources.

16. (Original) The method of claim 15, wherein the list is a table listing all virtual resources available for a given function.

17. (Currently amended) The method of claim 15, wherein the list includes a primary table and a secondary table, the primary table tracking a group allocation and the secondary table ~~maps~~ping ~~mapping~~ virtual uses.

18. (Currently amended) An ~~apparatus~~ apparatus for generating a scheduler for managing the hardware resources of ~~the a~~ wireless communication device having a ~~controller and~~ memory, the apparatus comprising:

- a) means for receiving a quantity of available hardware resources;
- b) means for generating a list in the memory for linking requests to the hardware resources;

c) means for receiving a desired quantity of hardware resources to be operated in the communication device;

d) means for receiving hardware resources operation information;

e) means for receiving a request to use at least one of the hardware resources;

f) means for assigning a memory address to the hardware resource operation information for each of the hardware resources; and

g) means for linking the memory addresses of hardware resources.

19. (Original) The apparatus of claim 18, wherein the list is a table listing all virtual resources available for a given function.

20. (Original) The method of claim 18, wherein the list includes a primary table and a secondary table, the primary table tracking a group allocation and the secondary table mapping virtual uses.